

College Students' Beliefs about Preschooler's Literacy Development: Results from a National Study of Jumpstart

Martha A. Adler & Mary Trepanier-Street
University of Michigan-Dearborn

Abstract

Although research indicates that early childhood literacy programs can be effective for preschoolers, little is known about the effects of programs on college student mentors. This study explored the beliefs of college students about literacy development in preschool children and whether these beliefs change after their involvement in a yearlong, intensive mentoring program intended to facilitate at-risk preschoolers' literacy development. Survey data from a large-scale national service program and a smaller local Jumpstart program were analyzed. Surveys from the national program investigated college students' beliefs about developmentally appropriate literacy practices. Sample surveys further investigated the nature of the students' beliefs, i.e., constructivist based versus skill based. Results indicate that a yearlong mentoring program positively impacted college students' beliefs and understanding about developmentally appropriate literacy practices.

Introduction

The educational community has long recognized that academic success requires at least on-grade-level reading with fluency and comprehension. Yet the National Assessment of Educational Progress (NAEP) data consistently report that many of our nation's fourth-graders are reading below basic levels (Perie, Grigg, & Donahue, 2005). In fact, while the average score increased two points for fourth-graders from 217 in 1992 to 219 (based on a possible 500 points) in 2005, "there was no significant change in the percentage of fourth-graders performing at or above *Basic* [levels]" (Perie et al., 2005). To remedy the situation, many schools have implemented programming aimed at improving reading instruction for their at-risk populations (Adler, 1999, 2002; Implementing Schoolwide Programs, 1998; U.S. Department of Education, 2005). Much of the funding throughout the past decades has been concentrated in the primary grades. More recently, "No Child Left Behind" legislation has raised the stakes for schools and has introduced federally funded programs, such as Early Reading First, for at-risk preschoolers ("No Child Left Behind," n.d.). Once again, more than two generations since the 1960s War on Poverty that introduced Head Start, serious consideration and program development are focused on preschoolers and their literacy development. Based on its extensive review of existent research, the National Research Council recommends that "all children, especially those at risk for reading difficulties, should have access to early childhood environments that promote language and literacy growth" (Snow, Burns, & Griffin, 1998, p. 320).

In efforts to achieve maximum instructional opportunities for their struggling readers, schools have increasingly relied on a volunteer force (such as college students) to supplement their instructional programming. Research from K-3 tutor studies can provide insights into the efficacy of these programs and their impact on not only the children but also the tutors themselves. Research supports the use of college students in early reading interventions (Juel, 1991, 1994, 1996; Reisner, Petry, & Armitage, 1990; Shanahan, 1998; Wasik, 1998) and is consistent with the research on service learning. This research suggests that college students' involvement with volunteer service learning projects positively impacts their academic development, leadership and conflict resolution skills, self-concepts, understandings of diversity, and sense of responsibility to others (Astin & Sax, 1998) and that these effects are long lasting (Astin, Sax, & Avalos, 1999).

Many agree that tutoring can be effective (Cohen, Kulik, & Kulik, 1982; Shanahan, 1998), particularly if tutors are well trained and provided with instructional support (Shanahan, 1998; Wasik, 1997). Adler (1999) found that the college students in one university program were able to carry out tutoring with minimal training. However, they trusted their own intuitions about literacy development instead of seeking expert advice. Many came into the experience with

preconceived notions about becoming literate that changed over the course of their working one-on-one with struggling readers. More research, however, is needed to better understand what college students consider to be important for the literacy development in young children.

Placing college students with at-risk preschoolers in order to effectively promote their language and literacy development requires that the college students implement best practice strategies. The research community acknowledges that literacy emerges through language-rich interactions with others who guide and facilitate its development (Teale & Sulzby, 1986; Vygotsky, 1986), that is, using a child-centered constructivist approach. Yet within the general population, there is an acceptance of a teacher-directed, skill-based approach as a means to develop literacy in preparation for school (Delpit, 1995; Heath, 1983; West, Hausken, & Collins as cited in Stipek & Byler, 1997).

It is our contention that by examining notions of literacy development held by college students working as literacy mentors in a well-designed structured mentoring program, we have the opportunity to gain a better understanding of how best to prepare adults working with young at-risk children and additionally benefit the reading teacher-educator community.

This study examines college students' beliefs about literacy development and best practice as they are trained and guided to work one-on-one with at-risk preschoolers. Using national and sample pre- and post-survey data, this study asks two questions: (1) What preconceived beliefs do college students have about literacy development in preschoolers? and (2) Does experience with a yearlong mentoring program for at-risk preschoolers affect college students' beliefs about literacy development?

Description of Preschool Literacy Mentoring Program

College students in this study were members of Jumpstart, founded in 1993 at the intersection of two national trends—the public need for high-quality early childhood programs and the emerging national service movement recruiting thousands of college students to community service (Our Story, 2006). This program, funded through Americorps, annually recruits college students to work individually with preschool children.

Children participating in the Jumpstart program are considered at risk for academic failure and attend Head Start or early childhood programs for low-income families. These state or federally funded programs are culturally diverse. Children are recommended by their preschool teachers and are matched by the national Jumpstart researchers to a control group. An evaluation of the Jumpstart Program (Jumpstart Evaluation Executive Summary, 2003) reported that the children enrolled in Jumpstart initially scored significantly lower than the non-Jumpstart children on all three subscales of the School Success Checklist, a modified version of the Child Observation Record (High/Scope Educational Research Foundation, 1992). By the end of the year, Jumpstart children's gains on the language/literacy, social, and initiative subscales were significantly greater than the non-Jumpstart children (Jumpstart Evaluation Executive Summary, 2003). The Jumpstart program continues each year, involving more preschoolers and college students.

The program pairs a college student mentor with an at-risk preschooler. In 2-hour, twice-weekly sessions, the college student conducts developmentally appropriate activities with the child to build language and literacy, initiative, and social skills. A team leader, a college student with some additional training or experience with children, plans and supervises the sessions. In addition, each college student works in the child's classroom for two 4-hour sessions per week, assisting the preschool teacher and other children in the classroom. College students work with the children throughout the school year, with most spending a total of approximately 300 hours, 25 of which include community service, such as helping at family and community events or making materials for the classroom or school. The college students also have several team-building experiences (e.g., whole group training, end-of-semester celebrations, and the wearing of Jumpstart t-shirts).

Training

The national Jumpstart organization requires that all college students in the program receive 40 hours of training in child development, literacy development, and the management of young children's behavior. They are also given training in active methods and strategies to interact with children to promote language, communication, literacy, problem solving, and social skills. National Jumpstart trainers or site coordinators, trained by the national organization, conduct the training (Jumpstart Education and Training Team, 2003).

College students receive further training in weekly meetings, during which they plan developmentally appropriate activities to conduct with their assigned young children. Throughout the year, team leaders observe the college students and provide feedback regarding their interactions with the preschoolers. In addition, the college students receive ongoing training and guidance from the preschool classroom teachers through observation and supervision.

The training, based upon materials developed by the National Association for the Education of Young Children, the High/Scope Educational Foundation, and the Stony Brook Reading and Language Project (Jumpstart Education and Training Team, 2003), treats literacy as a developmental process that is guided through child-centered, constructivist interactions.

According to the Jumpstart training manual, a high-quality session with the child would have the following characteristics:

[1] ...adults use a variety of strategies to encourage and support child language and communication ... [e.g.,] adults observe and listen before entering conversations with children, ... share control of conversations, ... converse ... in a give and take manner, [and] ask ... open-ended questions.

[2] ...adults demonstrate effective reading strategies ... [e.g.,] ... share books by giving children the opportunity to hold the book and turn pages, ... emphasize conventional book handling, ... use an engaging reading approach, ... [and] frequently use dialogic reading prompts. (Jumpstart Education and Training Team, 2003, p. 146)

In sessions with individual children, students are instructed to facilitate print knowledge, linguistic awareness, and emergent writing. In addition, when working in the child's classroom, participants are instructed to provide children access to reading, writing, and manipulatives that promote language and literacy development. The primary activity of the program is dialogic reading, where college students are expected to engage their children in reading and talking about books one-on-one during shared book reading (Lonigan, Anthony, Bloomfield, Dyer, & Samwel, 1999).

The National Study

Method

Subjects. Participants, whose surveys were made available to the researcher, were the 1,317 students attending 41 colleges and universities across the United States who participated in the 2003-2004 Jumpstart program. Of those colleges/universities participating, the majority were large (22, 54% over 10,000 students) public (26, 63%) institutions in urban areas (35, 85%). The 941 students who completed both the pre-survey and the post-survey were the subjects of this study. Eight hundred and ten (86%) subjects were female, and 131 (14%) male, ranging in age from 18 to 56 years old, with a mean age of 21 years. Six hundred and sixteen (65.4%) subjects participated for 300 hours of service, 192 (20.4%) participated for 200 hours, 81 (8.6%) participated for 525 hours, and 52 (5.5%) did not respond regarding participation. Seven

hundred and twenty-four (76.9%) were first-year Jumpstart participants. Of those identifying their race, 435 (46.2%) were White, 251 (26.7%) were African American, 101 (10.7%) were Hispanic, 63 (6.7%) were Asian, and 85 (9.0%) indicated other or did not respond. The majority (767, 81.5%) reported English as their first language.

The subjects varied widely in their major program of study in college; the two programs with the highest number of subjects were education (250, 26%) and human services (244, 25.9%). On the post-survey 315 (37.3%) students reported having taken one or more college-level courses in child development, and 252 (26.8%) reported having taken one or more courses in education. Subjects also varied according to college class levels (283, 30.1% freshmen; 280, 20.8% sophomores; 211, 22.4% juniors; 145, 15.4% seniors; with the remaining having graduated or not reporting). When surveyed about prior experiences with preschoolers, a small percentage of the participants indicated parenting (57, 6.1%). Other ways in which participants had worked with children included experience in preschools (357, 37.4%), in elementary schools (338, 35.9%), and in religious education (236, 25.1%), as well as camp counseling (226, 24%) and mentoring (134, 14.2%). Participants expressed a variety of personal reasons for joining Jumpstart; these included experience with children (839, 89.2%), in an outside-of-school program (804, 85.4%), in community service (801, 85.1%), with teaching (714, 75.8%), in teamwork with peers (735, 78.2%), and working with a national organization (694, 73.7%). Many (592, 62.9%) chose Jumpstart as a work-study opportunity.

Participation in the study was voluntary, and written permission for inclusion was received. Subjects were given individual ID numbers, and subject names did not appear on the surveys.

Instrument. For the national study, the Jumpstart Corps Member Survey Fall 2003 and the Jumpstart Corps Member Survey Spring 2004 were used. Both surveys were developed, piloted, and refined by researchers in the national Jumpstart organization. These surveys queried subjects in a number of areas, including demographics, reflection on attitudes and abilities to be an engaged citizen, early childhood practices, literacy development and practices, communication and leadership skills, and satisfaction with and reasons for joining and completing the Jumpstart program.

The section of the survey used in this study focused on knowledge and understanding of literacy development in young children prior to and after their experience in the program. Subjects were asked to respond to questions using a 5-point Likert scale with 1 as "not at all important" and 5 as "very important." Six questions regarding literacy were asked (Jumpstart Corps Member Survey, 2003, 2004):

When working with young children, how important do you think it is to

- have conversations where adults and children take turns and listen to each other?
- follow a child's lead in talking about topics that don't relate to the lesson plan?
- ask children questions that have a definite, one-word answer (e.g., asking them to identify colors, shapes, etc.)?
- have children pretend to read books to adults?
- have children attempt to write (e.g., copying letters they see in the room, scribbling, making letters in their name)?
- help children learn about rhyming (e.g., through games and songs)?

In addition, subjects were asked whether they agreed, disagreed, or were not sure about the statement "Play helps children develop language skills" (Jumpstart Corps Member Survey, 2003, 2004).

Procedure. The Jumpstart coordinator at each of the colleges or universities distributed the surveys to the subjects. Jumpstart coordinators were instructed to administer the pre-surveys

prior to their first mentoring training sessions. Subjects completed the surveys prior to and after their one-on-one experiences with the preschoolers in the program. Surveys were returned to the Jumpstart coordinator and then submitted to the national office. The national office released the raw data to the researchers for the purpose of this study.

National Study Results

Subjects' responses to the literacy questions on the pre-survey and the post-survey were scored and compared. Subjects responded to the items, except "play helps children develop language" question, using a 5-point Likert scale (1 = not at all important to 5 = very important). Question items were scored with the highest score of 5 given to the response of "very important" descending to 1 given to "not at all important" for the questions regarding "conversations with adults," "following child's lead in talking," "child pretending to read," "child attempting to write," and "child learning about rhyming" (Jumpstart Corps Member Survey, 2003, 2004). For the question "how important do you think it is to ask children questions that have a definite, one-word answer" (Jumpstart Corps Member Survey, 2003, 2004), responses were recoded with a score of 5 for a "not at all important" response descending to 1 for "very important."

Pre-survey responses were compared to post-survey responses. The means and standard deviations on the pre-survey and post-survey for all but the "play helps children develop language" question can be found in Table 1. The means were high on both the pre-survey and the post-survey for all except for the "ask questions with one answer" item. For this item, there was greater variation in the responses on both surveys and a low mean.

Table 1
Comparison of Means on the Pre-Survey and Post-Survey

Question	N*	Pre M	SD	Post M	SD	t**	df
1. Conversations, take turns, listen	837	4.67	0.607	4.79	0.475	5.238	836
2. Follow child's lead in talking	833	3.86	1.067	4.51	0.702	16.715	832
3. Ask questions with one-word answer***	836	2.18	1.076	2.45	1.153	5.954	835
4. Child pretend to read to adults	835	3.99	1.022	4.58	0.650	16.669	834
5. Child attempt to write	835	4.64	0.575	4.81	0.451	7.303	834
6. Child learn about rhyming	841	4.41	0.802	4.58	0.632	5.681	840

*Not all subjects responded to each question.

**All t-values were significant at the $p < .001$ levels.

***Responses were recoded with a score of 5 for a "not at all important" response descending to 1 for "very important."

Means were compared for each question using a two-tailed paired sample *t*-test (Table 1). On all of the items, there was a highly significant ($p < .001$) pre-survey to post-survey increase. The most amount of change from the pre-survey to the post-survey occurred on the questions regarding the importance of "follow the child's lead in talking about topics that don't relate to the lesson plan" and "have children pretend to read to adults."

For the "play helps children develop language" question, subjects were asked whether they "yes" agree, "no" disagree, or were not sure about the statement. On this question, there was also a pre-survey to post-survey positive change. On the pre-survey, 791 (84%) subjects agreed to the statement, and on the post-survey, 918 (97.5%) agreed—a change of 13.5%.

The data were further analyzed to determine whether subjects enrolled in an education program responded differently from subjects enrolled in other programs. There was not a difference in mean responses, with the same pattern of means for the pre- and post-survey change.

The Sample Study

Introduction

In an effort to better understand the national study, we examined a local sample of Jumpstart mentors during the 2004-2005 school year, asking the same research questions: (1) What preconceived beliefs do college students have about literacy development in preschoolers? and (2) Does experience with a one-year mentoring program for at-risk preschoolers affect college students' beliefs about literacy development?

Method

Subjects. Twenty-four public university students completed the yearlong Jumpstart program and participated in the sample study. Both demographics and training for the sample group mirrored those in the national study, with the exception of program of study. In this sample, 45.8% were majoring in education.

Procedure. For the sample study, college students were given pre- and post-surveys developed by the authors, which included open-ended questions. For the purposes of this study, only one open-ended question was analyzed: "What should adults do to prepare children to read?" The same procedure for survey administration for the national study was followed, with one exception: Completed surveys were returned directly to the researchers and not to the Jumpstart coordinator.

These data were transcribed and coded for responses that would indicate either a skill-based or a constructivist-based approach when working one-on-one with at-risk preschoolers. Those that described teacher-directed activities that emphasized the learning of discrete skills, such as practicing letters of the alphabet, were coded as skill-based. Responses that described activities that were interactive and child centered (e.g., "choose books that interest the child") were coded as constructivist based. A small number of participant responses were mixed (i.e., both skill-based and constructivist-based activities were included in the same response).

Sample Study Results

An analysis of the three sets of responses (skill based, constructivist based, and mixed) revealed that on the pre-survey, 45.8% of the college students indicated skill-based approaches. The mention of skill-based activities dropped to 16.6% on the post-survey. Constructivist strategies were listed by 58.3% of the respondents on the pre-survey; this percentage increased to 75% on the post-survey. Five (20.8%) on the pre-survey had mixed responses (i.e., both skill based and constructivist based), with only three (12.5%) on the post-survey.

Table 2 lists examples of subjects' responses. Reading to children and activities involving reading were the most frequent and consistent responses from all students on both the pre- and post-surveys. The range in variety of constructivist responses increased on the post-survey, with the addition of comments such as allowing the child to read to the adult. The range in variety of skill-based responses also decreased on the post-survey, with only two—"teaching letters/sounds" and "using flash cards"—listed.

Table 2

Examples of Skill-Based and Constructivist-Based Activities Listed by Respondents

Type of Response	Pre-Survey	Post-Survey
Skill Based	<ul style="list-style-type: none">Teach letters and/or sounds, or the	<ul style="list-style-type: none">Review letters and/or sounds

	<p>alphabet</p> <ul style="list-style-type: none"> • Practice word recognition strategies • Teach concepts of print • Use flash cards 	<ul style="list-style-type: none"> • Use flash cards
Constructivist Based	<ul style="list-style-type: none"> • Read to them • Talk • Allow child to select books • Follow up a book with activities • Get children to be active with the story 	<ul style="list-style-type: none"> • Read books • Talk • They [the children] can read to the adults • Choose books that interest the child • Make available all forms of written literature • Allow children to pretend and talk about the stories they listened to • Allow child to select books • Independent interaction with books • Listen to them [the children]

Discussion

While research indicates that early childhood literacy programs can be effective for preschoolers, little is known about the effects of programs on college student mentors. This study attempts to understand what beliefs college student mentors hold about literacy development in preschool children and to determine whether these beliefs change after involvement in an intensive mentoring program. The college students in this study participated in Jumpstart, a national program designed to facilitate literacy development among at-risk preschoolers, using strategies that are theoretically grounded in developmentally appropriate (i.e., constructivist and child-centered) practices.

This research was conducted in two parts, with an analysis of pre- and post-survey data from a national sample and a local sample of Jumpstart participants. Both pre- and post-surveys investigated whether a yearlong mentoring experience changed college students' beliefs about developmentally appropriate literacy practices and literacy development among preschoolers.

National surveys asked students to rate the importance of six literacy practices: (1) having conversations with children where they allow for turn taking and listening as the children talk, (2) following a child's lead in talking, (3) asking questions requiring only one-word answers, (4) allowing the child to pretend read, (5) allowing the child to attempt writing, and (6) engaging the child in rhyming (Jumpstart Corps Member Survey, 2003, 2004). An additional question asked students to rate the value of play as a vehicle for language development.

The college students' responses indicated that, prior to their experience, the students held some beliefs consistent with recognized, research-based practices that promote literacy development among preschoolers. These beliefs were strengthened throughout their yearlong experiences with the preschoolers, with the greatest gains in understanding being on the practices of taking a child's lead in conversation and allowing children to pretend read to adults. The results of the national study provide an initial insight into the nature of the potential for growth toward a constructivist view of literacy development.

The local sample results give further insight into the nature of the literacy beliefs of college mentors. Pre-survey results from the smaller local sample revealed that many college student mentors also held skill-based views (e.g., using flash cards). These views changed on the post-survey after their yearlong mentoring experience, with constructivist perspectives increasing and skill-based approaches diminishing.

This study is significant in that it is the first analysis of a national dataset of college student mentors working with at-risk preschoolers in an effort to facilitate their literacy development. Results from this study indicate that one-on-one mentoring programs can have an impact on the mentors' beliefs about literacy development and practices. This study indicates that the mentoring experience benefits college students.

The strength of the national study is its large sample of students who represent the diversity of colleges/universities from across the country. That the majority (60%) of the college students participating in the program were in either their first or second year is noteworthy. Given this fact, even those enrolled in education programs would have had limited field experiences such as was provided by the Jumpstart program. It may be that field experiences with children who are emerging into literacy would be particularly important for understanding literacy development.

Typically, the preparation of elementary education students does not include field experiences with preschoolers. While these firsthand experiences play a critical role in helping preservice teachers learn about teaching literacy, most field placements are in kindergarten through eighth grade. This study suggests that preschool placements may be of value for students to gain a deeper understanding of the nature of literacy development, which is an essential component in education methods courses on reading and literacy.

The study has a few limitations. Because program administration occurred in so many diverse sites across the United States, there may be some intervening variables (e.g., the timing of training and the administration of surveys) influencing the results. Because the purpose of the Jumpstart program is focused on service and not necessarily on research, the requisite controls for research may be somewhat compromised. Also there was no control group for the college student mentors in the study.

In conclusion, this research focusing on college students suggests that an intensive mentoring experience can positively influence their beliefs about literacy development. Future research should consider using a control mentor group. In-depth interviews and/or surveys investigating theoretical understandings about literacy development as well as the efficacy of field experiences with preschoolers should be conducted. This study and subsequent research have the potential to benefit future mentoring programs and the field of teacher education.

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Author Information

Martha A. Adler is an assistant professor in Reading and Language Arts and the coordinator of the English as Second Language Endorsement Program at the University of Michigan-Dearborn. Dr. Adler's research focuses on literacy, professional development, and public policy. Over her career, she has been involved in literacy education as a teacher, teacher-educator, curriculum developer, and researcher.

Mary Trepanier-Street is the associate dean and professor of Education at the University of Michigan-Dearborn. Dr. Trepanier-Street is also the director of the Child Development Center, the university early childhood and teacher preparation center. She has been involved in research and study of early childhood curriculum and the preparation of early childhood professionals for over 30 years.

Martha A. Adler
University of Michigan-Dearborn
School of Education
19000 Hubbard Drive
Dearborn, MI 48126-2638
Email: maadler@umich.edu